Municipal & Financial Services Group

Town of Purcellville

Water and Sewer Utilities

Water and Sewer Rates Discussion

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Town of Purcellville Virginia

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State of the Industry
What is causing the need for utility rate increases across the Country?

- Declining Water Use - Declines of per capita consumption of 20% to 30% over the past several decades
  - Water fixture replacement
  - Declines in average household size
  - Commercial/industrial water use efficiency
  - Conservation ethic
  - Economic conditions
- Significant Capital Investments will be needed in the future
  - Majority of water and sewer systems were constructed 70 plus years ago
  - Nationwide estimated replacement costs over next 30 years:
    - Water systems - $1 trillion
    - Sewer systems - $2.5 trillion

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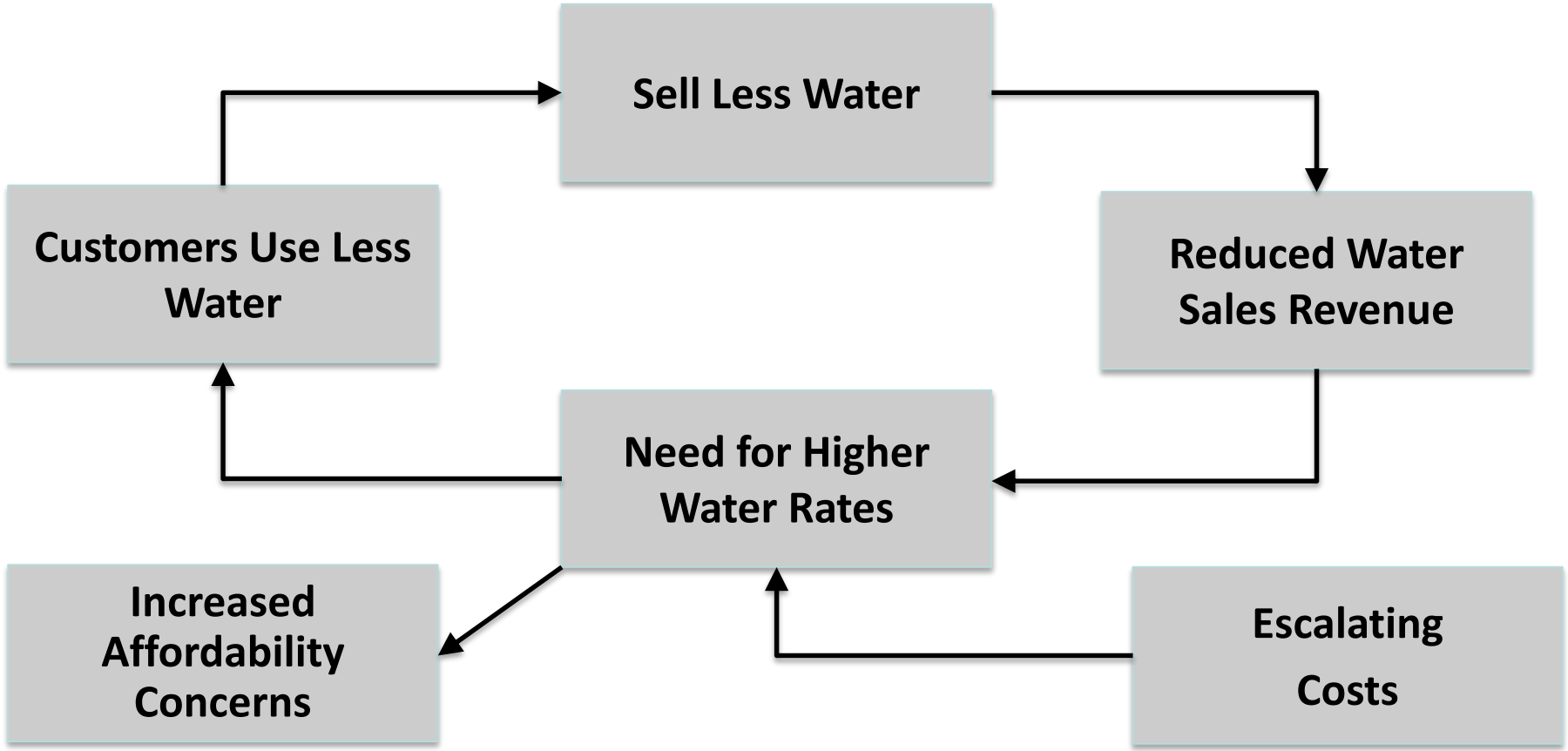
State of the Industry
How do these issues influence rates?



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Basic Principles of Rate Setting

- Water and Sewer Operations are self-supporting
  - Rates and fees are set to recover cost of providing service
  - No profit to General Fund
  - Operations function as a business
  - Utilities reimburse General Fund for support services
- Water and Sewer Rates are user fees rather than taxes and therefore are designed to charge customers based on their use of the service.
  - Three part test for a user fee (Bolt v. City of Lansing, MI) (1988):

    1) Must serve a regulatory purpose rather than a revenue-raising purpose; and

    2) Must be proportionate to the necessary costs of the service; and

    3) Must be voluntary— users must be able to refuse or limit their use of the commodity or service.

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Overview of Rate Setting Process

Step 1 - Identify Revenue Requirements - Cost of Providing Services

Step 2 - Allocate Costs Among Customers

Step 3 - Design Rate Structure

Step 4 - Implementation

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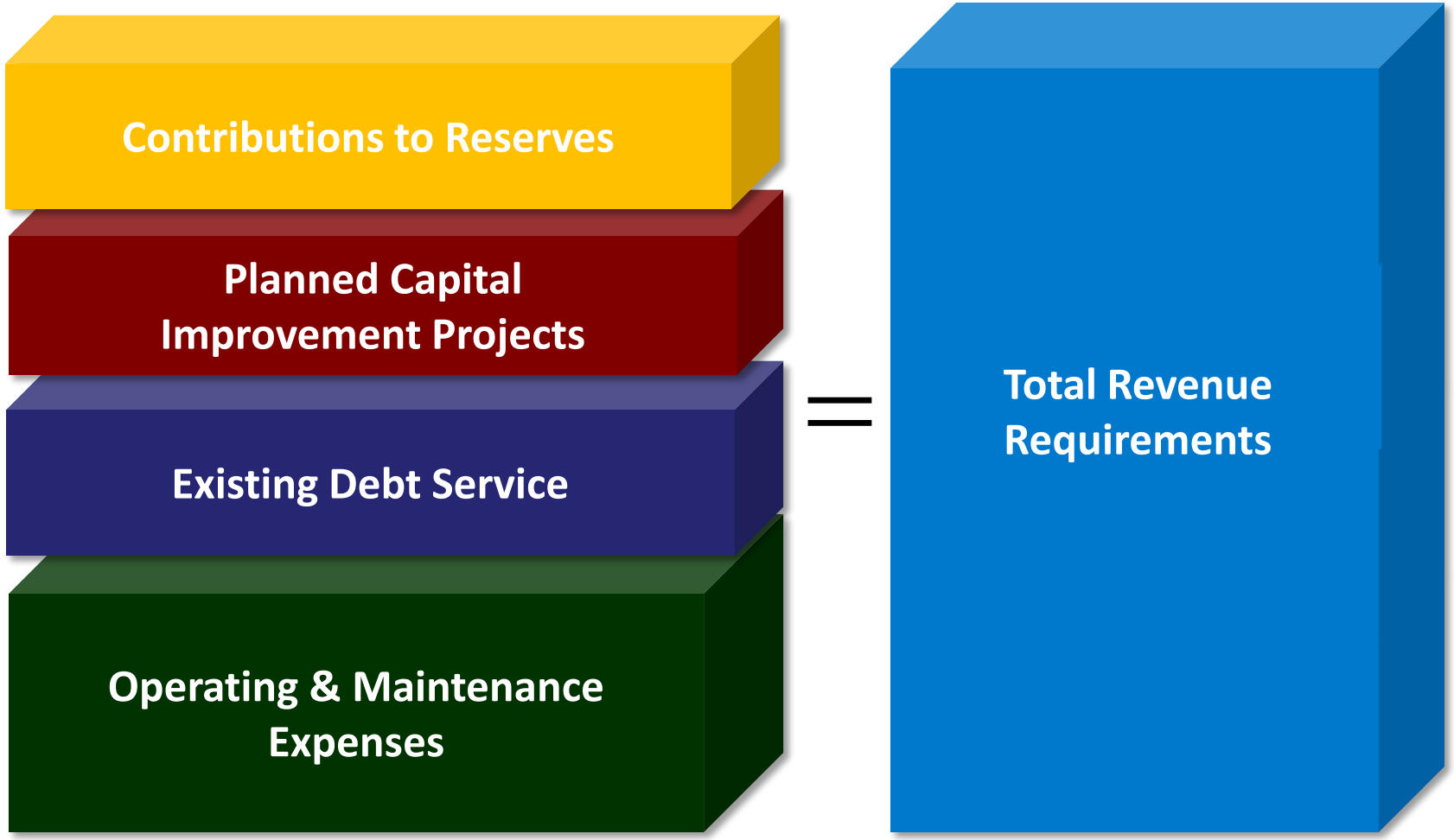
“Building Blocks” of Revenue Requirements



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Operating and Maintenance Expenses

- Day to day operating and maintenance of the system including:
  - Source of Supply (water)
  - Treatment
  - Disposal (sewer)
  - Storage (water)
  - Pumping
  - Transmission and Distribution (water mains and lines)
  - Collection (sewer)
  - Customer Service
  - Administrative and General

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Debt Financing Plans

- Existing debt: Requirements to make existing payments and maintain any coverage requirements

- Future debt: Based on how the capital improvements plan will be funded, key considerations include:

  - Life of asset to funded (longer lived assets typically debt funded)
  - Type of improvement (routine replacement ideally cash funded)
  - Overall debt level considerations including percentage of total revenues used to pay debt service

- Debt Service places additional requirements on utility:

  - Debt coverage requirements (revenue bonds)
  - Debt service reserves (revenue bonds)
  - Use of Governing Body's debt capacity (general obligation bonds)

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Capital Improvement Plan

- Capital needs of the water and sewer system required to:
  - Repair and replace existing infrastructure (rates)
  - Meet existing and new regulatory requirements (rates)
  - Upgrade and increase efficiency of the systems (rates)
  - Provide service to new customers (availability fees)
- Capital costs have significant impact on water and sewer rates due to the fact that:
  - Most water and sewer infrastructure is constructed in “lumps” rather than incrementally
  - Costs of projects fluctuate year over year depending on type
  - General approach used to fund projects:
    - Cash funded = immediate impact
    - Debt funded = long-term impact

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Contributions to Reserves

- Water and Sewer Funds should maintain reserve balances related to:
  - Debt Coverage
    - ✓ According to bond covenants / loan requirements
  - Operating and Maintenance
    - ✓ Typically 90 days cash on hand
    - ✓ Serves as “rainy day fund” for immediate and unexpected expenses
  - Capital Replacement
    - ✓ Based on value, useful life, and condition of assets
    - ✓ Serves as rate increase mitigation (“smoothing factor”) when assets must be refurbished/replaced
    - ✓ Decreases the need to borrow for major projects

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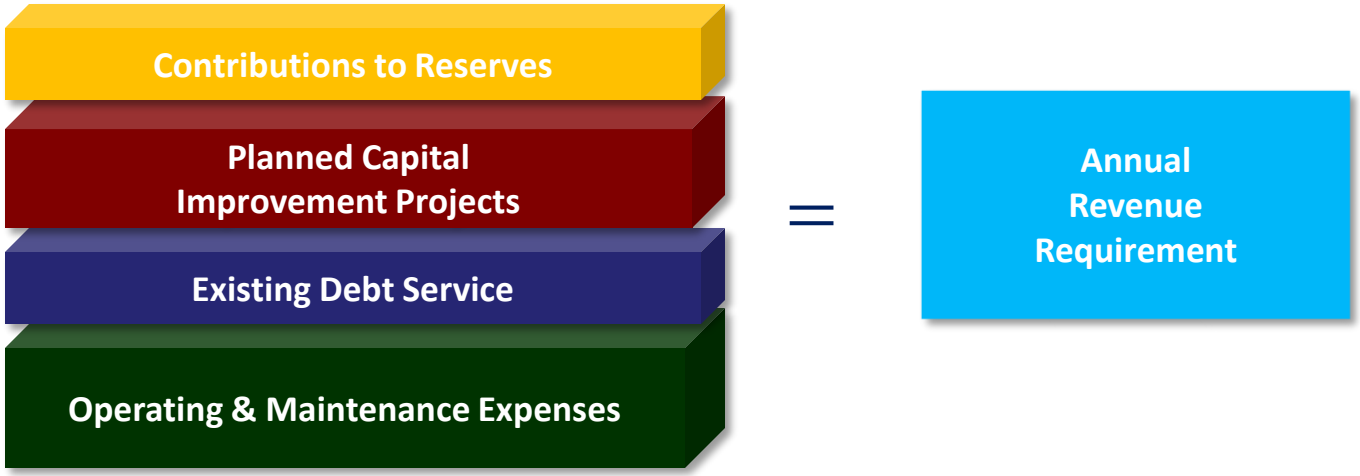
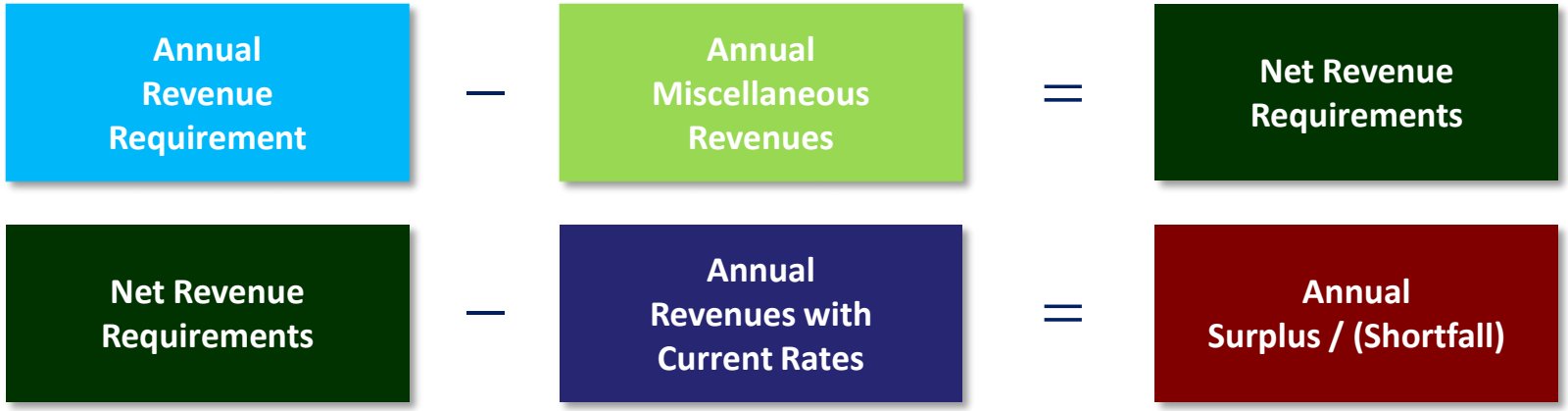
Basic Outline of Rate Setting Process





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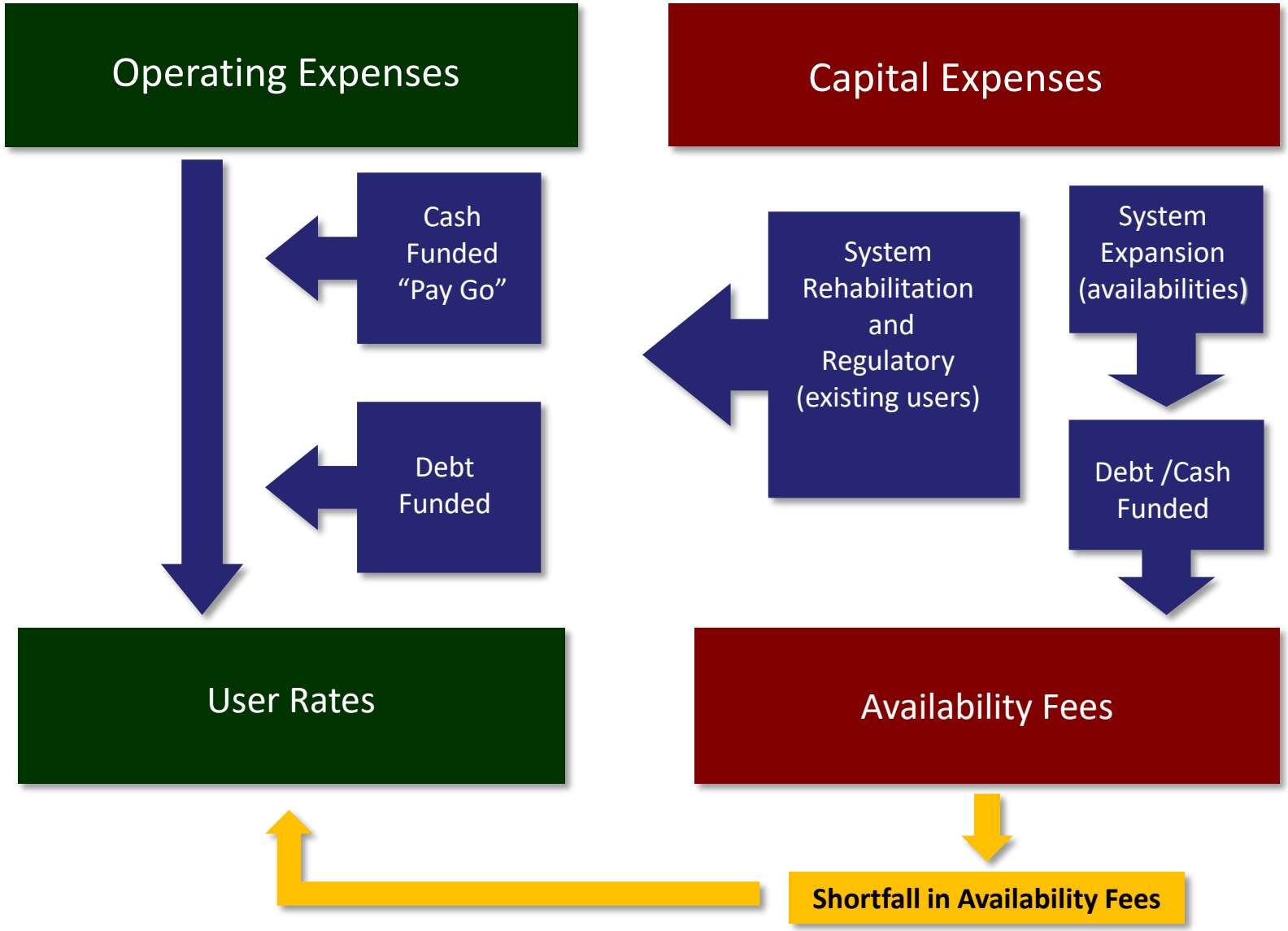
Flow of Funds



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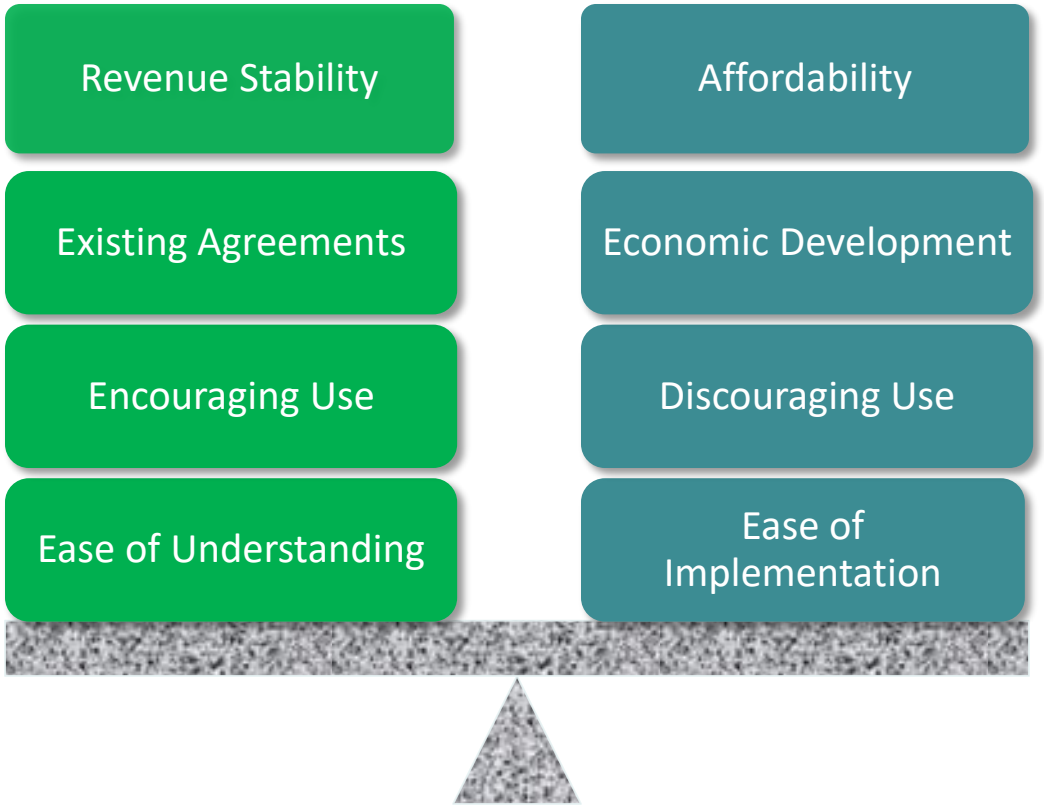
Rate Design – Pricing the Service

Rate design is largely influenced by policy objectives of the utility.



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Rate Design – Fixed Portion

What Costs to Recover

-Meter Reading
- Billing & Collection
-Customer Service
-Debt Service
-Other

- Higher the fixed charge the greater the revenue stability
- Higher the fixed charge the more expensive service is for smallest user

Basis for Applying the Charge

-Account
-Meter size
-Equivalent Residential Unit (EDU)

- Basis selected should be consistent with costs recovered

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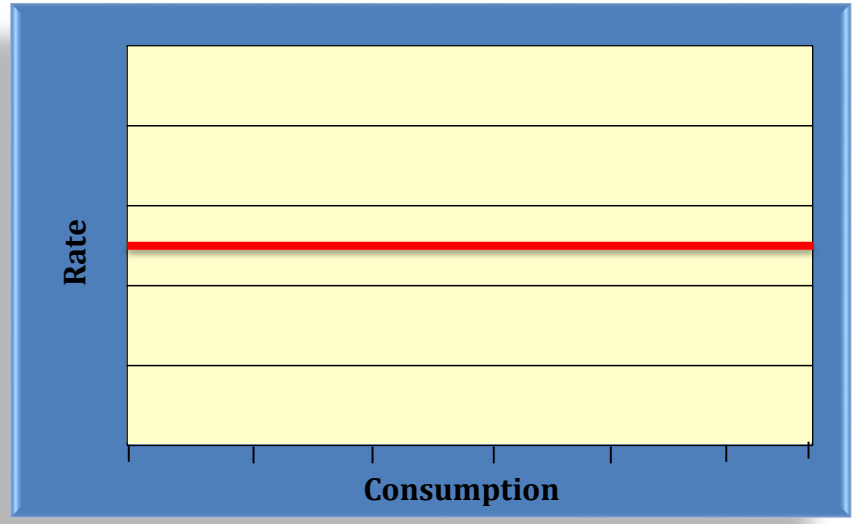
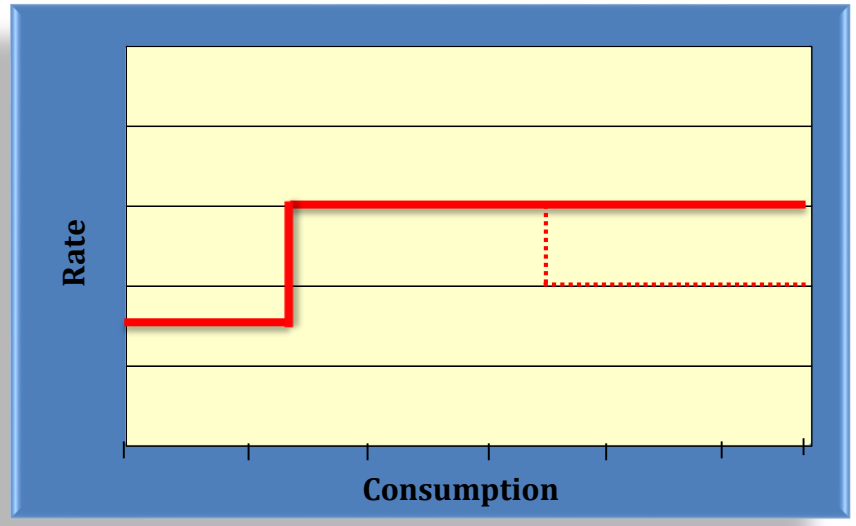
Rate Design – Variable Portion

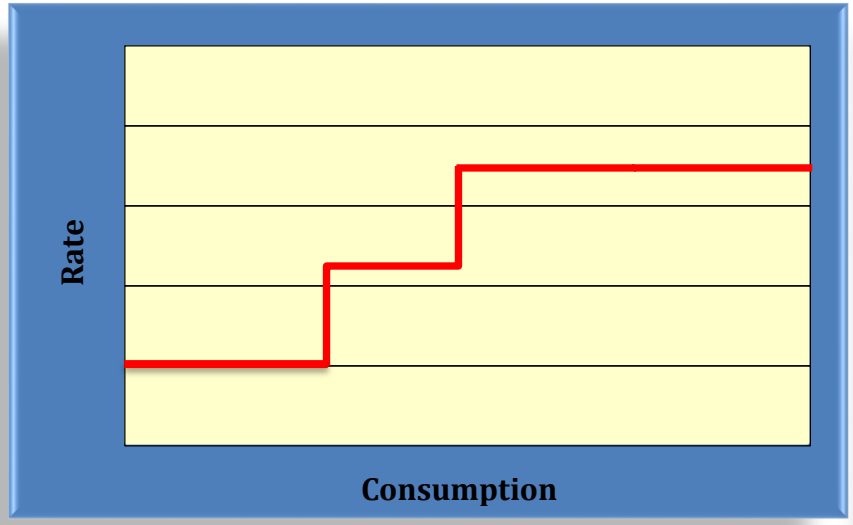
Uniform



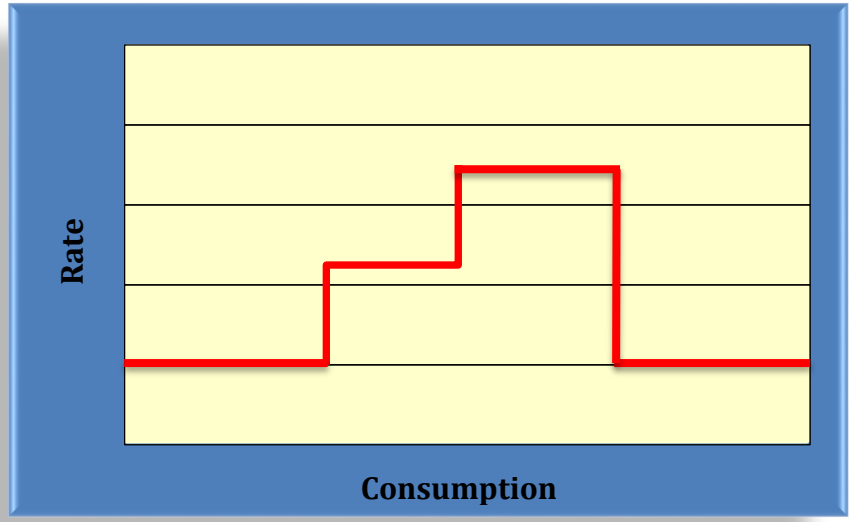
Lifeline Block



Inclining



Combination



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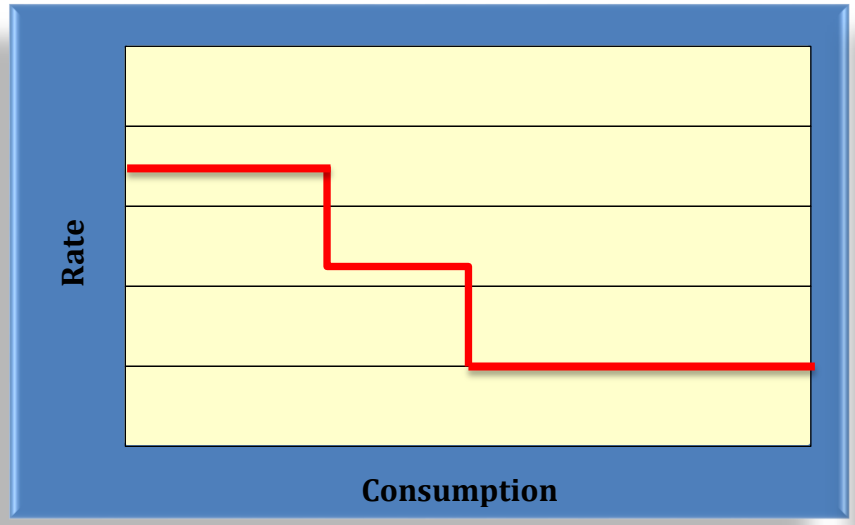
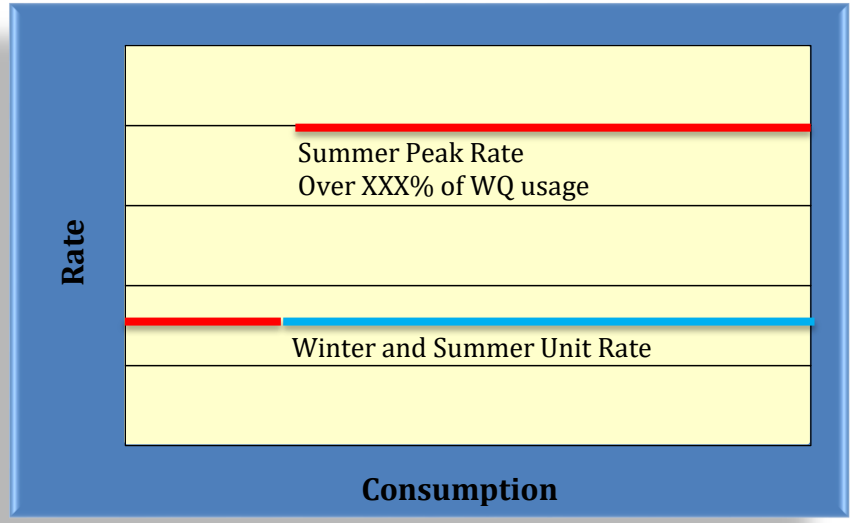
Rate Design – Variable Portion

Declining



Seasonal / Peak Usage



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Summary

- Utility rates should be set to cover the operating and capital expenses of the utility system.

- Sometimes, there is no “right” answer: Town policy influences which rate structure is used to collect utility fees.

- Utility financing is a long term endeavor:
  - Early small increases mitigate the need for large future increases
  - Debt financing distributes costs among current / future users
  - Ultimate Goal – Keep utility rates and fees as low as possible **over time**.

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Discussion

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Discussion Items

- The specific rate setting philosophy of the Town Council
- Methods of cost allocation between small and large users
- The Town's policy on special discounts / subsidies (low income, elderly, etc.)
- Monthly billing opportunities
- Reducing the tier system from 17 tiers down to 5 tiers
- Water only metered accounts for specific businesses whose water consumption is not comparable to their sewer usage
- Development of reserves & replacement funds.
- Minimum usage fees.